

REMARKS**COMMENT TO RESTRICTION REQUIREMENT:**

On October 14, 2007, an office action (the “October Office Action”) issued requiring restriction to one of two groups of claims, namely:

Group I. Claims 1-15, 42-45; or

Group II. Claims 16-41, 46 and 48.

On January 10, 2008, the Applicant’s prior patent counsel elected Group I, presumably without traverse. Notably, claim 47 was not referenced in the October Office Action, but should have been identified as a Group I claim. There was no rejection of claim 47 in the present Office Action, but for the purposes of this response, the Applicant will assume that the same rejections applied with respect to claims 1-15 and 42-45 apply to claim 47 as well.

REVIEW:

Claims 1-15, 42 – 45 and 47 are currently pending in the application. The Office Action rejected all of the claims under 35 U.S.C. 103(a) as being unpatentable over Jacobs et al. (U.S. 6,013,528) in view of Little et al. (U.S. 6,024,925). In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. *See, e.g., In re Dow Chemical, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and In re Keller, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981).* If an independent claim is nonobvious, any claim depending from it is also nonobvious. *In Re Fine, 837 F.2d 1071, 1076 (Fed. Cir. 1988).*

RESPONSE TO REJECTIONS:**Claim 1:**

According to the Office Action:

Jacobs et al. discloses an analysis device that includes a dispensing tip (nozzle), analyzer aspirator, and a preferred light-tight enclosure connected to the spectrophotometer by passageways using a pair of fiber optic cables. **The fiber optic cables are connected to the nozzle and the spectrophotometer.**

See Office Action at p. 3 (emphasis added). Applicant respectfully disagrees that the fiber optic cables of Jacobs are connected to the nozzle. Rather, Jacobs discloses a disposable tip 48 (i.e., nozzle) that is **separate from** and is “**moved to**” a test station 82 that is connected to the spectrophotometer. See Jacobs at col. 4 lines 54 – 60 (emphasis added); see also col. 5, lines 46 – 50 (“In use, tip 48 is inserted into station 82 before insertion into holder 116. While at station 82, a beam of NIR and adjacent visible wavelengths as defined above, is passed through the tip and its liquid so that transmitted radiation is spectrophotometrically analyzed at spectrophotometer 110.”) The test station 82 comprises a block 83 (Fig. 2A) that is separated from the tip 48 by “about 0.5 mm.” See Jacobs at Col 5 lines 13 – 18. Jacobs thus discloses a system in which a nozzle is separate from and is temporarily moved to a test station connected to a spectrophotometer. The present invention discloses a system in which the nozzle **itself** comprises a flow cell connected to a spectrometer. Such a system is not taught or suggested by either Jacobs or Little or the combination of the two.

As amended, independent claim 1 contains the limitation of “a fiber optic probe connected to each of the flow cells.” Neither Jacobs nor Little teaches or suggests connecting a fiber optic probe to each of a plurality of nozzle flow cells. Further, claim 1 contains the limitation of “a flow cell in each of the liquid aspiration and dispensing nozzles.” Neither Jacobs

nor Little discloses such a flow cell. Rather, the flow cell in Jacobs is in a separate test station 82, which is connected to a spectrophotometer. See Jacobs at col. 5, lines 46 – 50. Therefore, the combination of Jacobs and Little does not teach or suggest this limitation.

Claims 2 - 15:

Claims 2 - 15 depend from claim 1 and are therefore also not obvious for at least the reasons discussed above with reference to claim 1.

Claim 42:

Independent claim 42 contains the limitations:

a plurality of liquid aspiration and dispensing nozzles connected to the liquid handling robot; and

a spectrophotometer, wherein each of the liquid aspiration and dispensing nozzles are multiplexed to the spectrophotometer.

The Office Action combines Jacobs and Little for its rejection, stating:

Jacobs et al. does not disclose xyz liquid handling robot and a plurality of nozzles.

However, Little et al. discloses robotic liquid handling device that consists of 16 probes housed in a probe block and mounting on an X Y, Z robotic stage.

The robotic xyz stage and robot driver is capable of maneuvering of probes (nozzles) for loading, unloading, dispensing, and cleaning.

It would have been obvious to one [of] ordinary skill in the art at the time of the invention to recognize the single nozzle embodiment maybe modified to such to incorporate a robotically movable multiple nozzles as taught by Little et al. to allow for numerous functions such as dispensing, loading, unloading, and cleaning.

See Office Action at p. 3. However, the combination of Jacobs and Little simply does not disclose or teach claim 42. Specifically, neither Jacobs nor Little discloses or teaches multiplexing a plurality of nozzles to a single spectrophotometer. As discussed above, Jacobs

discloses a single nozzle which is temporarily placed on a test block that is connected to a spectrophotometer. Little discloses a system for mechanically depositing controlled volumes of fluid to a sample array. Little does not teach or disclose multiplexing a plurality of nozzles to a single spectrophotometer. Therefore, claim 42 is not obvious in view of the combination of Jacobs and Little.

Claim 43:

Claim 43 depends from claim 42 is therefore not obvious for the reasons discussed above. In addition, claim 43 contains the limitations “wherein each of the liquid aspiration and dispensing nozzles comprise a flow cell, and wherein each of the flow cells are multiplexed to the spectrophotometer by a pair of fiber optic cables.” As discussed above with respect to claim 1, neither Jacobs nor Little teaches or discloses a flow cell as part of the nozzle. Rather, Jacobs discloses a flow cell that is part of a separate test block 82 and Little discloses a system for depositing controlled volumes of sample fluid to a test array. Further, neither Jacobs nor Little teaches or discloses multiplexing multiple flow cells to a single spectrophotometer. Therefore, claim 43 is not obvious in view of Jacobs and Little.

Claim 44:

Claim 44 depends from claim 42 and therefore is not obvious for the reasons discussed above.

Claim 45:

Claim 45 depends from claim 4, which depends from claim 1, and is therefore also not obvious for the reasons discussed above.

Claim 47:

Claim 47 depends from claim 1 and is therefore also not obvious for the reasons discussed above.

CONCLUSION

In view of the foregoing amendments and comments, Applicant respectfully requests withdrawal of the current grounds of rejection and the issuance of a formal Notice of Allowance. The Examiner is invited to telephone the undersigned at his convenience to permit early resolution of any outstanding issues.

Respectfully submitted,

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Date


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